

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: PETERSON *ET AL.*

Serial No.: 08/738,944

Group Art Unit: 1805

Filed: October 24, 1996

Examiner: Brusca, J.

For: METHODS FOR GENERATING AND  
SCREENING NOVEL METABOLIC PATHWAYS

Attorney Docket No.: 8757-007

**DECLARATION OF TODD C. PETERSON, LYNDON M. FOSTER,  
AND PAUL BRIAN UNDER 37 C.F.R. § 1.132**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

We, TODD C. PETERSON, LYNDON M. FOSTER, and PAUL BRIAN

do declare that:

1. We are co-inventors of the invention disclosed and claimed in the above-captioned patent application.
2. We are also co-inventors along with Katie A. Thompson and Nicole M. Nasby of the invention disclosed and claimed in application serial no. 08/639,255 ("the '255 application"), filed October 24, 1996. The above-captioned application is a continuation-in-part of the '255 application.
3. I, Todd C. Peterson, currently hold the position of Associate Director, at ChromaXome Corporation, San Diego, California, the Assignee of both the above-captioned application and the '255 application, where I have been

appointed since 1996. I received the degree of Doctor of Philosophy in 1989 from University of Southern California.

4. I, Lyndon M. Foster, currently hold the position of Research Scientist at ChromaXome Corporation, San Diego, California, where I have been appointed since 1996. I received the degree of Doctor of Philosophy in 1991 from UCSB (University of California Santa Barbara)

5. I, Paul Brian, currently hold the position of Research Scientist at ChromaXome Corporation, San Diego, California, where I have been appointed since 1996. I received the degree of Doctor of Philosophy in 1992 from John Innes Institute Norwich UK.

6. We three collaborated with Katie A. Thompson ("Thompson") and Nicole M. Nasby ("Nasby") at ChromaXome Corporation on a project which was directed to the development of methods for making and screening combinatorial gene libraries containing genetic materials derived from one or more organisms. The project resulted in more than one invention for combinatorial gene expression libraries. But, we did not all contribute to all of the inventions. For example, the three of us along with Thompson and Nasby invented the subject matter claimed in the '255 application.

7. The '255 application describes, but does not claim, another invention resulting from the afore-mentioned research project. That is, combinatorial gene expression libraries using shuttle vectors for cloning cDNA or genomic DNA fragments of donor organisms, which is the subject matter claimed in the instant application. The shuttle vector may contain sequences that permit maintenance and/or replication of the vector in more than one host organism, and sequences derived from naturally-occurring plasmids which can facilitate the transfer of the vector among various compatible host organisms via conjugation. The instant application provides descriptions of mobilizable combinatorial gene expression libraries that are constructed with shuttle vectors with the appropriate replication origins, transfer origins, and selection

mechanisms. The DNA sequences of donor organisms cloned in such mobilizable libraries may readily be transferred from one initial species of host organisms to a variety of other organisms where the donor DNA can be stably maintained, replicated and expressed.

8. We three jointly conceived of using shuttle vectors for cloning and expression of genes of donor host organisms, and of incorporating sequences into shuttle vector that enables conjugative transfer of cloned DNA fragments among various compatible host organisms as described in the '255 application. We also jointly conceived of mobilizable combinatorial gene expression libraries and methods for making such libraries as disclosed in the instant application.

9. Thompson and Nasby did not provide any inventive contributions to subject matter described and claimed in the instant application..

10. We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, and any patent issuing thereon.

Date: 8/15/97

Todd C. Peterson  
Todd C. Peterson

Date: 8/19/97

Lyndon M. Foster  
Lyndon M. Foster

Date: 8/19/97

P. Brian  
Paul Brian